CALIFORNIA Climate ACTION Registry

2nd Public Workshop on the CCAR Draft Updated Forest Protocol

Focus: Harvested Carbon Accounting

February 3, 2009

Points to Cover

- **Project principles**
- **Update process**
  - Workgroup
  - Issues addressed
- **Accounting for harvested carbon**
- **De minimus**
- **Other miscellaneous**
- **Timeline**

CCAR Project Principles

- Protocols are standardized, performance-based
- Reductions are accurate, conservative (minimize uncertainty)
- Process is public
- Development is driven through stakeholder workgroup
- Climate Action Reserve
  - Strong Standards
  - Independent third-party verification
  - Public Registration (serialization, tracking)

Update Process

- ARB sought broader application:
  - private commercial forests not associated with a land trust
  - private non-timber forests (oak woodlands)
  - public lands

  CCAR sought improvements and expanded use
  - Update science
  - Better address leakage, permanence, baseline
  - Improve guidance for calculations
  - Cost-effective methods
  - Use throughout the United States

Forest Protocol Workgroup

- Group size chosen to foster dialogue and be effective
- Have met at least every 3 weeks since November 2007, in all-day sessions
- CCAR managed process
- Comprised of:
  - Private and public landowners, large and small
  - Environmental organizations
  - Scientists/Academics
  - Agencies
  - Verifiers

Forest Protocol Workgroup Subcommittee leads

- Improved Forest Management Baseline – Eric Holst, EDF
- Public Lands Forest Management Baseline – Bruce Goines, USFS
- Reforestation Baseline – Doug Wickizer, CAL FIRE
- Avoided Conversion Baseline – Michelle Passero, TNC Permanence – Ed Murphy, SPI
- Leakage – Katie Goslee, Winrock
- Co-Benefits – Robert Hrubes, SCS
- Quantification, wood products, de minimus – Tim Robards, CAL FIRE

Issues Addressed in Update

Dec 5 Workshop

- Maintain core principles:
  - Real, Permanent, Additional, Verifiable, and Enforceable
- Baseline and additionality
- Risk-management: permanence and leakage
- Quantification
- Co-benefits

Today

- Harvested carbon accounting
- De minimus
- Other miscellaneous

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Accounting for Harvested Carbon

Guiding Principles to Account for Harvested Carbon

- The purpose of the inclusion of any carbon pool (including harvested carbon) is to accurately and conservatively assess the climate benefits of forest management activities.
- Forest sector responsible for initial sequestration of carbon.
- Accounting needs to be accurate and crediting be conservative.
- Quantification needs to be technically sound.

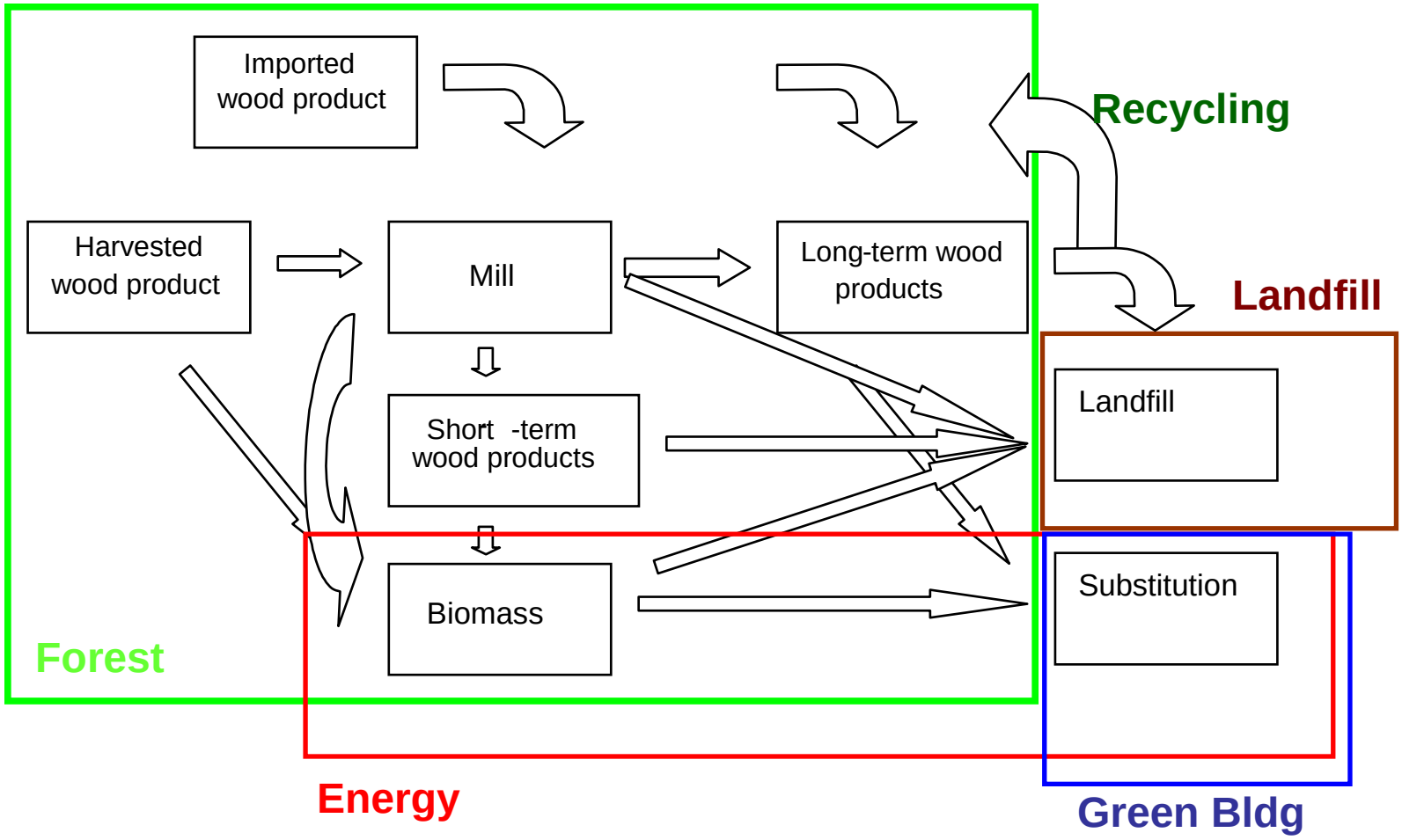
Forest Workgroup Approach

- Reviewed current treatment of harvested wood products in existing protocols (CCAR, CCX, DOE 1605b, RGGI, VCS, Duke, Georgia)
- DOE 1605b selected because UNFCCC standard and comprehensive treatment of
  - Chain of Custody - Basis of Volume Estimation
  - Calculation Methodology - Application to project carbon stocks
- Applied 1605b accounting approach to quantify life-cycle pools and emissions

Forest Workgroup Approach

- Included wood product approach in both baseline and project activity quantification.
- Considered improvements to 1605b guidance where local data support more resolute mill efficiency and product distribution data.
- Considered national decay rates from 1605b.
- Separated quantification (accounting) from crediting (policy).

Wood Product Life Cycle – Multiple Sectors



1605b 100-yr Carbon Trends

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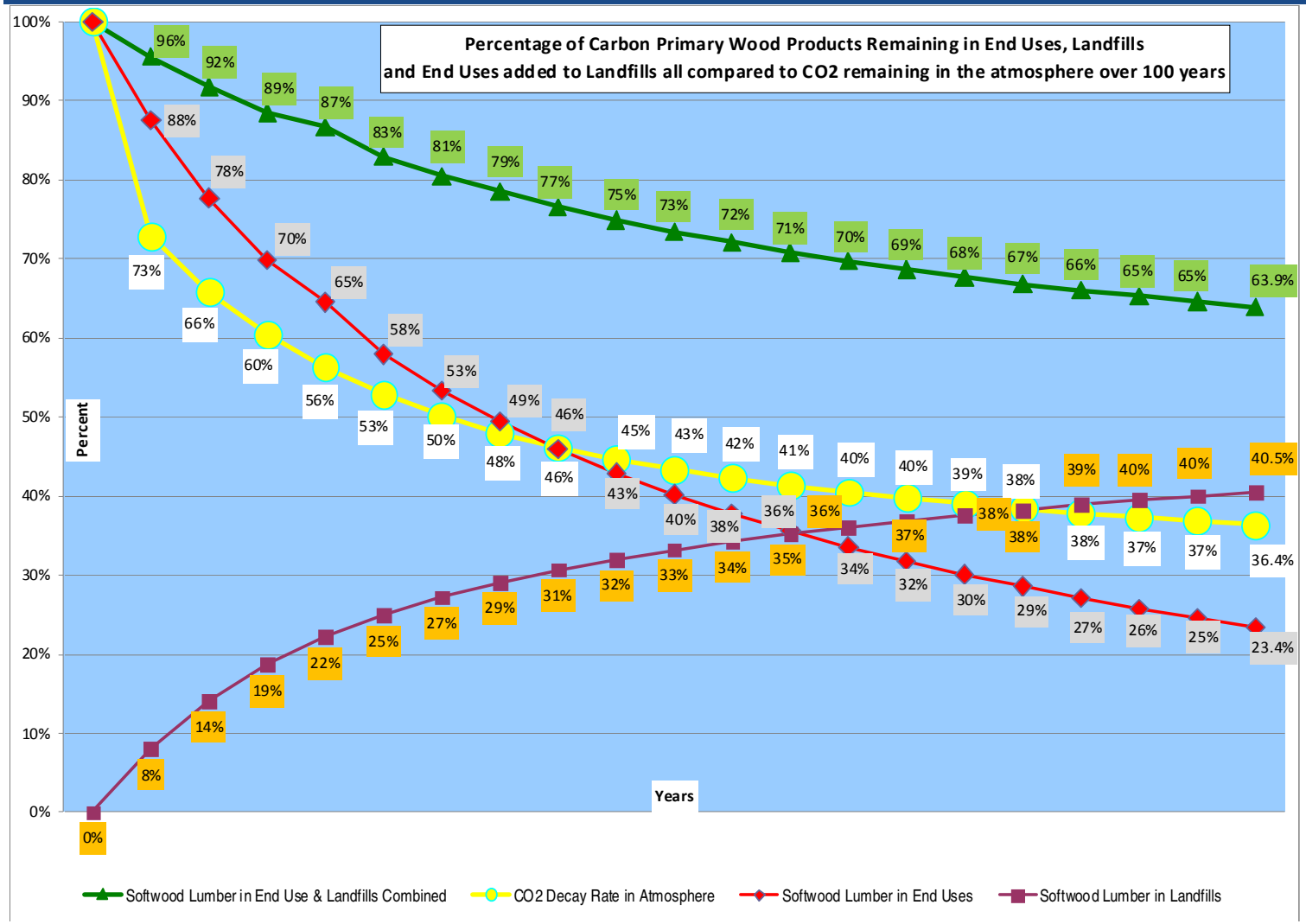

Softwood lumber in landfill + long-term in-use

Landfill Atmosphere

Softwood lumber in long-term in-use

1605b Cumulative Average Decay

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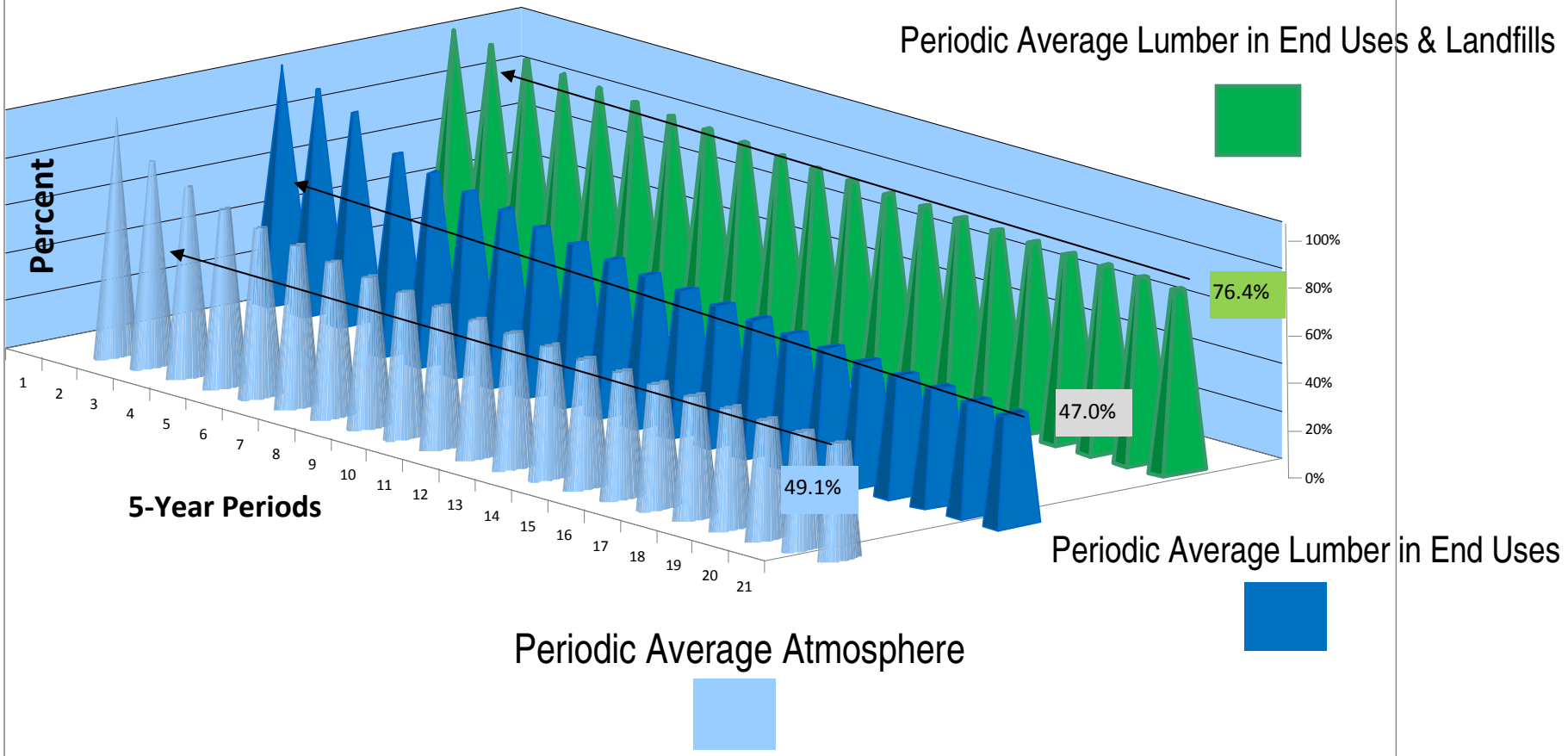
Percentage of Carbon Primary Wood Products Remaining in End Uses, Landfills and End Uses added to Landfills all compared to CO2 remaining in the atmosphere over 100 years



1605b 100-yr Carbon Trends Cumulative Averages

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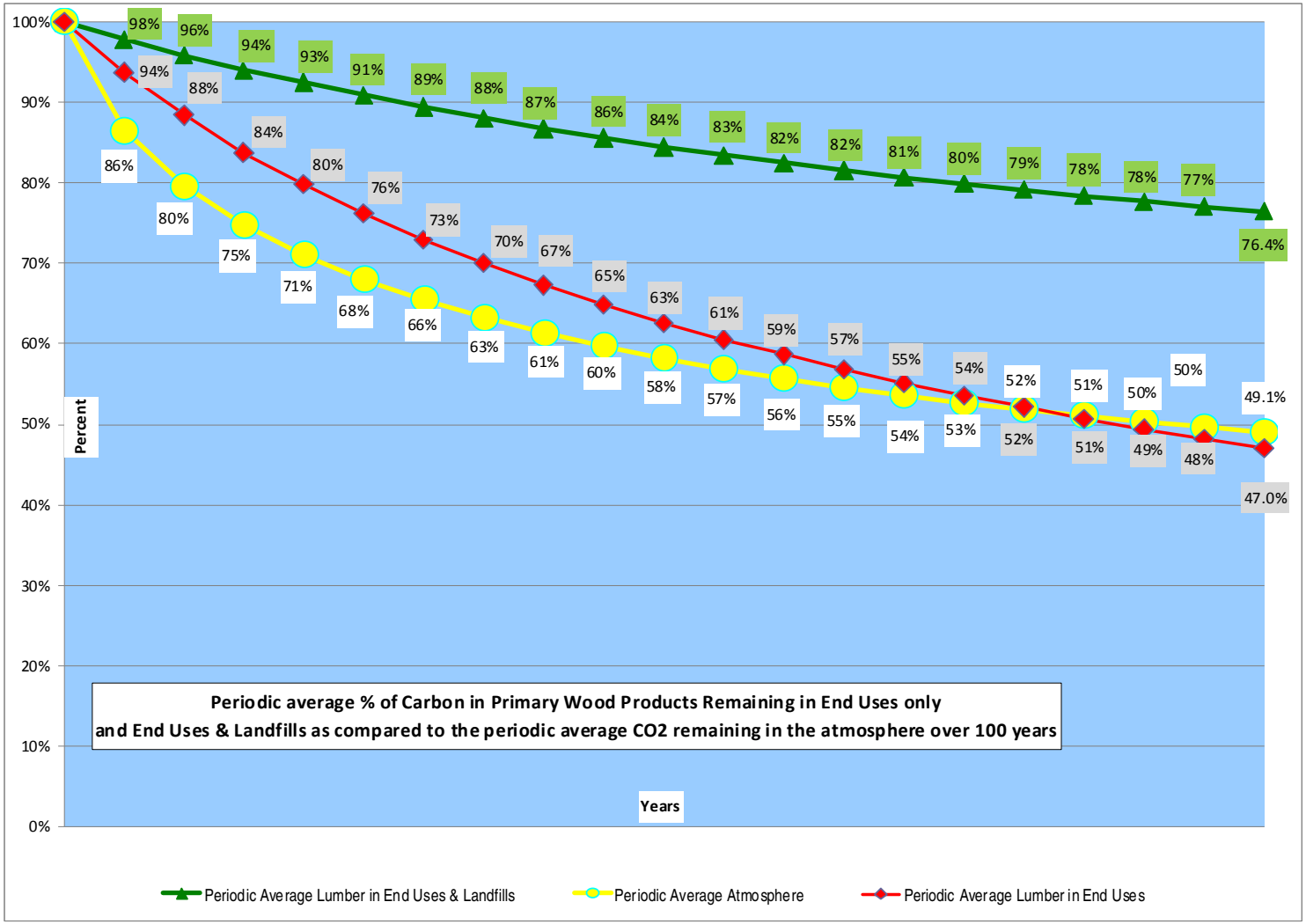

Softwood lumber in landfill + long-term in-use

Atmosphere

Softwood lumber in long-term in-use

Subcommittee Findings

- Accurate forest project accounting requires the accounting of harvested carbon in both baseline and project activity analyses.
- The forest sector must account for all emissions over a 100-year defined period to address permanency and transparency issues, even though cross-sector accounting guidelines have not yet been established programmatically.
- Accounting and crediting are not the same and should be separated.

Subcommittee Recommendations Accounting

- The forest protocols will provide guidance for the accounting of:
  - Carbon in logs delivered to the mill.
  - Mill efficiencies and products produced within the assessment area.
  - The 100-year average carbon in use.
  - The100-year average carbon remaining in landfills.

Subcommittee Recommendations Crediting of Harvested Carbon

- For conservative crediting, crediting will be based on the 100-year carbon cumulative average of in-use harvest carbon.
- This includes accounting for mill efficiencies and product generation for each assessment area.
- Crediting does not include landfill carbon storage.

De Minimus

De minimus Workgroup Recommendation

- Remove determination of de minimus and deleterious from the protocol.

- Pools are either required or optional.

Required/Optional Pools

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Category	Carbon Pool	Forest Management	Reforestation	Avoided Conversion	Determination of Value
Living biomass	Above-ground living Biomass	Required	Required[1]	Required	Sampled in Project
	Below-ground living biomass	Required	Required[1]	Required	Calculation based on above ground sampling
	Shrubs and Herbaceous Understory	Optional	Required	Optional	Sampled in Project
On-site Dead biomass	Standing Dead Biomass	Required	Required	Required	Sampled in Project
	Lying Dead Wood	Optional	Optional[2]	Optional	Sampled in Project
	Litter	Optional	Optional	Optional	Sampled in Project
Soil	Soil[3]	Optional	Optional	Optional	Sampled in project
Off-site Dead biomass	Wood Products	Required	NA	Required	Decay calculation from volume of harvested wood

1/ Existing trees are not considered a part of a reforestation project but must be tracked over time to keep separate from regeneration. Since residual and new trees are easy to identify for several decades, this may be done at the first inventory.
2/ Lying dead wood is not a part of a reforestation project, however if the pool is significant and expected to diminish over time then it must be inventoried and is a required pool.
3/ Soil carbon is not anticipated to change significantly due to forestry activities, however, exceptions may exist including deep ripping or significant soil erosion.

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Other Miscellaneous

Other Updates

- Project definition clarity
- Project start date
- Reforestation baseline

Verification Protocol

- Drafted after Forest Project protocol goes through public review

Comments received by CCAR to date

- Baseline – summarize comments
- Additionality – summarize comments
- Permanence – summarize comments
- Co-benefits – summarize comments
- Leakage – summarize comments
- Quantification – summarize comments

Timeline

- ✓ **Public workshop on wood products quantification and other miscellaneous items on February 3, 2009.**
- **New, additional two week public comment period to address wood products or other protocol issues now open.**
  - **Concludes on February 20, 2009**
- **Comments can be provided online at: http://www.climateregistry.org/tools/protocols/project-protocols/forests.html**
- **Final Forest Project protocol to CCAR Board in April 2009**

Contact

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http://www.climateregistry.org/tools/protocols/project-protocols/forests.html